



THOMAS G. NEWMAN,  
EDITOR.

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## Editorial Buzzings.

**Whatever** you have to say, my friend,  
Whether witty, or grave, or gay,  
Condense as much as ever you can,  
And say it in the readiest way;  
And whether you write of rural affairs,  
Or matter and things in town,  
Just take a word of friendly advice,  
Boil it down.

**Deadly.**—All the yellow fever and cholera that ever prevailed in this country was not equal in fatality to *la grippe* during the past sixteen months.

**When Dividing,** give full sheets of comb-foundation in the brood-frames having no combs. It will encourage the bees to work.

**The Wisconsin** Foul-Brood Bill has passed the Senate, and our friend, Hon. B. H. Standish, who is the Chairman of the Committee to whom it was referred, is one of the principal apiarists of that State. There is but little doubt of its becoming a law, being in the hands of such a clever and successful manager as Mr. Standish.

**Bee-Keepers' Union.**—Mr. E. France had an article in *Gleanings* for March 1, combatting the idea of the Union being absorbed in the North American Bee-Keepers' Association. He did not seem to understand that the Union is already a part and parcel of that association, so far as its influence and protective care is concerned. We hope to find room for Mr. France's article soon.

Mr. E. R. Root added these very complimentary words—still erroneously thinking, however, that the mantle of the association was not extended over the Union:

I can agree with friend France, in regard to the inadvisability of merging the Bee-Keepers' Union into the North American Bee-Keepers' Association. Under its present management, and with its small membership, the Union has done a magnificent service. Could it do better under the wings of the North American? I doubt it.

It is true, there is a kind of ignorant prejudice that some farmers and others have, that bees injure their apple crops. At our Shane yard, located in an orchard, an old farmer intimated that, since the bees had been there, they had not been able to get any apples. I showed him that there were others who had no bees near them who got no better crops. The facts were, if the bees were removed entirely the crop would not be as good. It is a remarkable fact, that, whenever there is a good yield of buckwheat honey, there is always a good crop of grain. A good yield of honey is accompanied by a moderate yield of grain.

**Canton,** a city of Fulton county, Ill., is now in commotion. Complaints have been made to the Mayor against the bees belonging to Mr. G. W. Cole. They are branded as a "nuisance." The facts are, however, that the opposition grows out of ignorant jealousy, which should be promptly rebuked by all justice-loving people. The Mayor and councilmen have all been dosed with the full text of the arguments of Judge Williams, of Arkansas, proving that bees are not a nuisance, *per se*. We await results.

**The Foul-Brood Bill** was introduced into the Illinois Legislature by Hon. W. S. Smith, of Macon, on April 9, 1891. It was then read by title, ordered printed, and referred to the Committee on Retrenchment. The bill is entitled "A Bill for an Act for the suppression of foul-brood among bees, and making appropriation for the expenses of the work," and reads as follows:

WHEREAS, Bee-keeping is a large and growing industry in the State of Illinois, and worthy of protection and encouragement; and

WHEREAS, The bee-keepers of the State have petitioned the General Assembly to levy a tax on each stand [colony] of bees, the revenue therefrom to be used in the suppression of foul-brood among bees, and the promotion of the bee-keepers' industry; therefore,

SECTION 1. *Be it enacted by the People of the State of Illinois, represented in the General Assembly, That the Illinois Bee-Keepers' Association shall, at each annual meeting, or the Directors of said association shall, if during the interval between two annual meetings the occasion should arise, appoint a State Inspector of apiaries, and such number of Assistant Inspectors as the exigencies of the service may from time to time require.*

SEC. 2. The Assistant Inspectors may, when so directed, as hereinafter provided, perform all the duties and exercise all the powers conferred by this act, and delegated hereby to said State Inspector.

SEC. 3. The State Inspector or Assistant, on entering upon any premises in the discharge of his duties shall, if so required, produce the certificate of the President of the said association, that he has been appointed as such Inspector or Sub-Inspector, as the case may be.

SEC. 4. The said State Inspector and Assistant Inspector shall hold office for one year from the date of the annual meeting at which they were appointed; or, if they have been appointed by the Directors, then until the next annual meeting after such appointment, and shall be eligible for re-election, but the said State Inspector or Assistant Inspector may at any time, subject to the approval of the Governor, be removed from office by the Directors for neglect of duty, or other sufficient cause, and in

case of such removal, the Directors shall, without delay, appoint a successor.

SEC. 5. The said Inspector shall, whenever so directed by the President of the Illinois Bee-Keepers' Association, visit, without unnecessary delay, any locality in the State of Illinois, and there examine any apiary or apiaries to which the said President may direct him, and ascertain whether or not the disease known as "foul-brood" exists in such apiary or apiaries; and whenever the said Inspector shall be satisfied of the existence of foul-brood in its virulent or malignant type, it shall be the duty of the Inspector to order all colonies so affected, together with the hives occupied by them, and the contents of such hives, and all tainted appurtenances that cannot be disinfected, to be immediately destroyed by fire under the personal direction and superintendence of the said Inspector; and after inspecting infected hives or fixtures, or handling diseased bees, the Inspector shall, before leaving the premises, or proceeding to any other apiary, thoroughly disinfect his own person and clothing, and shall see that any Assistant or Assistants with him have also thoroughly disinfected their persons and clothing: *Provided*, that where the Inspector, who shall be the sole judge thereof, shall be satisfied that the disease exists, but only in milder types, and in its incipient stages, and is being, or may be treated successfully, and the Inspector has reason to believe that it may be entirely cured, then the Inspector may, in his discretion, omit to destroy, or order the destruction of, the colonies and hives in which the disease exists.

SEC. 6. The Inspector shall have full power, in his discretion, to order any person or possessor of bees dwelling in box-hives in apiaries where the disease exists (being mere boxes without frames) to transfer such bees to movable-frame hives within a specified time, and in default of such transfer, the Inspector may destroy or order the destruction of such box-hives and the bees dwelling therein.

SEC. 7. Should the owner or possessor of diseased colonies of bees, or of any infected appliances for bee-keeping, knowingly sell, barter, or give away, any such diseased colonies or infected appliances, he shall, on conviction before any Justice of the Peace, be liable to a fine of not less than \$50 nor more than \$100, or to imprisonment for any term not exceeding two months.

SEC. 8. Should any person whose bees have been destroyed, or treated for foul-

brood, sell, or offer for sale, any bees, hives, or appurtenances of any kind after such destruction or treatment, and before being authorized by the Inspector so to do, or should he expose in his bee-yard, or elsewhere, any infected comb, honey, or other infected thing, or conceal the fact that said disease exists among his bees, he shall, on conviction before a Justice of the Peace, be liable to a fine of not less than \$20 and not more than \$50, or to imprisonment for a term not exceeding two months and not less than one month.

SEC. 9. Should any owner or possessor of bees refuse to allow the Inspector or his Assistant or Assistants to freely examine said bees, or the premises in which they are kept, or should such owner or possessor refuse to destroy the infected bees and appurtenances, or permit them to be destroyed when so directed by the Inspector, he may, on complaint of the Inspector, be summoned before a Justice of the Peace, and on conviction, shall be liable to a fine of not more than \$50 nor less than \$25 for the first offense, and not more than \$100 nor less than \$50 for the second and any subsequent offenses; and the said Justice of the Peace shall make an order directing the said owner or possessor forthwith to carry out the directions of the Inspector.

SEC. 10. Where an owner or possessor of bees shall disobey the directions of the said Inspector, or offer resistance to or obstruct the said Inspector, a Justice of the Peace may, upon the complaint of the said Inspector, cause a sufficient number of special constables to be sworn in, and such special constables shall, under the directions of the Inspector, proceed to the premises of such owner or possessor, and assist the Inspector to seize all the diseased colonies and infected appurtenances, and burn them forthwith; and if necessary the said Inspector or constables may arrest the said owner or possessor, and bring him before a Justice of the Peace, to be dealt with according to the provisions of this act.

SEC. 11. Before proceeding against any person before a Justice of the Peace, the said Inspector shall read over to such person the provisions of this act, or shall cause a copy thereof to be delivered to such person.

SEC. 12. Every bee-keeper or other person who shall be aware of the existence of foul-brood, either in his own apiary or elsewhere, shall immediately notify the President of the Illinois Bee-Keepers' Association of the existence of

such disease, and in default of so doing shall, on summary conviction before a Justice of the Peace, be liable to a fine of \$5 and costs.

SEC. 13. Upon receiving the notice in the preceding section mentioned, or in any way becoming aware of the existence of foul-brood in any locality, the said President shall immediately direct the said Inspector to proceed to and inspect the infected premises: *Provided*, that when the person giving such notice is unknown to said President, or there is reason to believe that the information in said notice is untrustworthy, or that the person giving such notice is actuated by improper motives, then the said President may require the person giving such notice to deposit the sum of \$5 with the President, as a guarantee of good faith, before the said notice shall be acted upon, and [if] it shall prove that said notice was properly given, then the said deposit shall be returned to the person giving such notice, but otherwise the said deposit shall be forfeited to the use of the said Illinois Bee-Keepers' Association.

SEC. 14. The said association shall include in its annual report to the Governor a statement of the Inspector's work during the preceding year, which statement shall include the number of colonies destroyed by order of the Inspector, and the localities where found, and the amount paid to him for his services and expenses for the preceding year.

SEC. 15. The Directors of the said association may, from time to time, make such by-laws and regulations for the control and guidance of the Inspector in carrying out the provisions of this act as they may deem necessary; and the said Directors shall also by by-law fix the amount of the remuneration of the said Inspector and Sub-Inspector, but all such by-laws and regulations shall be subject to the approval of the Governor.

SEC. 16. It shall be the duty of each assessor, at the time and in the same manner as other property is listed for taxation, to require each owner of bees to specify on the schedule containing his or her assessed property, the number of stands [colonies] of bees in his or her possession, which information the assessor shall add up and note in his assessment book under proper headings, with the footings given in the space provided for the aggregates.

SEC. 17. There shall be annually assessed and collected, at the same time and in the same manner as other State

taxes, 5 cents on each stand [colony] of bees, which tax shall be paid into the State treasury at the same time and manner as other State taxes, and be used for the suppression of foul-brood among bees, and the promotion of the apian industry of the State, as may be, from time to time, voted by the Illinois Bee-Keepers' Association, and approved by the Governor.

SEC. 18. The revenue derived from the operations of this statute, or so much thereof as may be necessary for the purposes specified in the foregoing section, is hereby appropriated to defray the expenses contemplated by this act, to be paid by the State Treasurer upon warrants drawn by the Auditor of the State, which warrants shall be drawn only upon vouchers and bills signed by the President of the Illinois Bee-Keepers' Association, countersigned by the Secretary thereof.

**In England** the season is reported by the *British Bee Journal* to be "all that one could wish." Spring has arrived in good earnest, and "the time for the singing of birds has come," the bees are merrily buzzing and bringing in pollen. The *British Bee Journal* thus refers to the matter:

Luckily for colonies which have lost heavily in bees this Winter, the warm weather of February did not last long enough to induce breeding to any considerable extent, otherwise the cold during the greater portion of March has been quite severe enough to cause shrinkage of already attenuated clusters, sufficient to make certain that, in some cases at least, chilled brood would have been inevitable. So far, however, as we can learn, no harm has been done, and the welcome return of cool weather has no doubt saved the lives of an enormous number of bees which would inevitably have perished had warmth accompanied the late boisterous weather of the early part of March. Any day, however, may see a wonderful change, and the season be on us before we can look around.

The following from the *Bee-Keepers' Record* on the same subject will also be read with interest:

Bees have passed through one of the severest Winters on record, and are found to-day in better condition than for some years past. In confirmation of

this assertion, we direct attention to the numerous reports in this issue, and it will be seen that in the all-round good condition of the great majority of our readers' apiaries, there is substantial cause for congratulation. A few days of much-needed warmth in February was followed by a "close" March—close, fortunately, in the sense of keeping bees in-doors, and thus avoiding the heavy losses often incurred when March has been a mild but boisterous month. Few bee-keepers can help feeling a pang when scores of bees, tempted by the treacherous warmth outside, are seen to leave their snug homes only to be carried off by the high wind, the force of which prevents their return, and this at a time when bee-life is so precious. The recent storms, however, have been productive of no loss in this way, for scarce a bee took wing while the fierce gales lasted.

**Microbes**, even though we think of them only as enemies, have uses in the world. They are friends as well as foes. Dr. Byron D. Halsted writes thus to the *New York Tribune* about their uses in the economy of Nature:

A few years ago, when, with the advent of the better lenses, it was stated that all diseases would, in time, be found due to bacteria, it was then thought that these microscopic germs were only our enemies. Now the sight has deepened, and we conclude that we live, as well as die, by them. They are the minute scavengers of the world, and by means of their ever-presence and great rapidity of multiplication, the earth is kept sweet—or, at least, the bacteria do their part to remove filth by hastening decay.

Within the past few years it has been found that the very important list of changes in the soil known under the name of nitrification, is due to the action of bacteria. They have gone further than this, and claim that the superior power that some plants, as the clovers, lupins, peas, and other leguminous crops, are able to draw upon special sources of nitrogen because of the bacteria associated with their roots. They find tubercles or small galls on the roots, which are the places where the bacteria breed.

Let the study of these germs be prosecuted fully, for only good can come of it. It may be found that it will be unsafe to exclude bacteria from anything in which changes are desired.



## Queries and Replies.

### Caging the Queens for 2 or 3 Weeks.

QUERY 763.—Will it injure, in prolificness or otherwise, a young queen that has been laying a week or 10 days, to cage her for 2 or 3 weeks?—J. W. J.

Yes.—H. D. CUTTING.

No.—DADANT & SON.

I think not.—A. B. MASON.

In my judgment, yes.—MRS. HARRISON.

I suspect it does a little, but not much.—C. C. MILLER.

I do not know, but fear that it would.

—C. H. DIBBERN.

I think not; but possibly I am wrong.—EUGENE SECOR.

Not often, if she be kept at a proper temperature.—R. L. TAYLOR.

It would be likely to do her a permanent injury.—J. M. HAMBAUGH.

Perhaps. It will injure your business to make it a practice to do so, I think.—JAMES HEDDON.

All such prolonged caging has a tendency to weaken the prolificness of the queen.—J. P. H. BROWN.

I would not like to risk it. Much would depend upon the manner in which she was caged, and upon her supply of food.—M. MAHIN.

It would do her no good to so cage her, and unless I had some special reason for caging her, I should, by all means, let her have her liberty.—G. M. DOOLITTLE.

I do not think so, but who knows for certain? Queens are often injured in shipping, but who will say that he can tell just how it happened?—A. J. COOK.

I do not think it does any harm to confine a queen 4 or 5 days, but I know of no necessity, except in shipping queens, to confine them for so long.—G. L. TINKER.

I do not think it will. I can see no reason, either, why it should. Young queens are carried from Maine to California—in fact the world over—without injury.—J. E. POND.

According to my experience, yes. Young queens that are shipped in cages, being out no longer than from 2 to 4 days, will not live, on the average, as long as queens reared and kept at home at steady work, and queens that are one or more years old are worthless, except as breeders, if caged and shipped a few

hundred miles. Such is my experience.

—G. W. DEMAREE.

Much depends upon the care exercised in the transaction. While it may not injure the queen to cage her for 2 or 3 weeks, after she has commenced to lay, it should not be practiced unless there is an urgent necessity for doing so. When carefully put into properly provisioned cages, queens have been mailed to Australia, but nearly all of them are short lived, and many are injured more or less.—THE EDITOR.

### Transferring Bees, Etc.

Will Mr. Heddon please answer the following through the BEE JOURNAL:

1. If that "forced or transferred" swarm (see page 472) may be expected to cast a swarm, after the "forcing" or "transferring?"

2. Does he still practice the plan outlined on page 126 of the BEE JOURNAL for 1883, for preventing second swarms?

3. Should we place a colony, say, a week before swarming time, on top of a hive filled with empty combs, with a queen-excluding honey-board on top of the latter, would the colony cast a swarm, or try to? HALLETT & SON.

In response to the questions of Messrs. Hallett & Son, let me say that the reply I shall make will not be suitable for an article in the BEE JOURNAL.

1. Whether the forced swarm will cast a swarm or not, will depend upon the same peculiar local conditions which would govern the actions of a natural swarm. They are not apt to, in most localities, provided they are managed so as to prevent increase, if the owner does not desire any increase.

2. Yes; I always transfer by the new method, called modern transferring, whenever I have any transferring to do.

3. Yes; if they had previously arranged to do so. But, of course, the bees would return, as the queen could not go, and, when the young queens hatched, probably one of them would pass through the excluder, and out would come the swarm, to stay. But if the season was not favorable to swarming, and the bees had made no previous preparations, then probably they would not come out. But I do not believe in any of the compulsory methods to prevent swarming. The best methods are those which prevent the desire, and all preparation for swarming. It is much like the best method of guiding our children in the way they should go.

Dowagiac, Mich. JAMES HEDDON.

## Topics of Interest.

### Origin of Foul-Brood.

S. CORNIEL.

Mr. Robinson is to be commended for tacitly admitting the weight of the authorities I quoted to prove that there is no such thing as spontaneous generation, that there are no latent spores in living, healthy tissues, and that neither fermentation nor putrefaction can take place in the larvæ of bees, except such as is caused by microbes introduced from without.

The only error he attempts to defend by anything more than his own incoherent and rambling statements, is that the microbes of foul-brood do not harm mature bees. To support his contention, he correctly quotes Dr. Dzierzon as saying that "foul-brood, indeed, is a disease of the larvæ, and not of the emerged bees;" but the paper in the *Bienen Zeitung*, from which this quotation is taken, was written in 1857—that is 17 years before Prof. Cohn, or any one else, thought of looking for microbes in either bees or brood. Mr. Robinson might better have conceded this point with the others.

It is a pity that Mr. Robinson continues to claim that before his pretended discovery in 1882, it was not a well-established, and well-known fact that foul-brood is a germ disease, because to settle the matter now, once for all, I shall be obliged to strip him of his assumed honors as a discoverer, and place him in his true position.

Mr. Robinson says "I was the first who, in 1882, pointed out that foul-brood was the result of bacteria," and again he says, "Prior to 1882 no writer respecting foul-brood, in America or elsewhere, mentioned that foul-brood is caused by germs." Mr. Robinson either forgets, or presumes too much on the forgetfulness of his readers.

Within a short time previous to the announcement of Mr. Robinson's pretended discovery in 1882, Muth's Practical Hints, Kohnke's Foul-Brood, its Origin, Development and Cure; Dzierzon's Rational Bee-Keeping, and Quinby's Bee-Keeping Explained, were published, in each of which it is taught that foul-brood is the result of bacteria. There is an essay by Mr. C. F. Muth, in the AMERICAN BEE JOURNAL for 1879, and

he has another in the same periodical for 1880, in both of which the cause of the disease is attributed to germs. In an essay on page 504, of the AMERICAN BEE JOURNAL for 1879, Dr. L. C. Whiting says: "The researches of Dr. Preusz, and others, lead to the opinion that the disease is caused by a microscopic fungus *cryptococcus alveolaris*." On page 460 of the AMERICAN BEE JOURNAL for 1880, there is an essay on foul-brood by Mr. Kohnke, in which he says, "It is a process of putrefaction, induced by the presence of bacteria, a low form of animal life pervading the honey and the stomachs of the bees, the germs of which are so small that the slightest whiff will carry them, not only from one hive to another, but from one apiary to another."

In the face of the foregoing facts, published not in "far-off Europe," but at his very elbow, so to speak, how absurd it is for Mr. Robinson to say that, prior to 1882, no writer mentioned that foul-brood is caused by germs.

Mr. Robinson says: "Dr. Cohn did not make any experiments that demonstrated whether the germs that he espied under the lens were such as to originate foul-brood by contagion," and again "Dr. Cohn's discovery afforded no clue to a solution of the problem, and nothing came of it."

It should be borne in mind that in his experiment, in which he claims to have discovered that foul-brood is a germ disease, Mr. Robinson saw no germs, nor does he know, as a matter of observation, that there were any. He only inferred that they were present, presumably from reading of the discoveries made by more thorough investigators. We shall now see what came of Dr. Cohn's discovery.

At a gathering of bee-keepers held at Saltzburg, Germany, in the Spring of 1876, within two years after Prof. Cohn made his discovery, Dr. Dzierzon asked, "What is to be looked upon as decided relative to foul-brood, both as regards theory and practice, and what remains now undecided?" After discussion it was agreed that the following problems should be solved experimentally:

"First. It must incontrovertibly be proved that the spores of the fungus leave the dried up foul-brood, and they must, inasmuch as they float in the air, be capable of being caught."

"Second. It must next be shown that such fungus spores, that are caught in the atmosphere, when placed on healthy larvæ, can grow and increase to an unaccountable number, until at last they

kill the brood, and so prove themselves the cause of the sickness."

To Dr. Shoenfeld was assigned the task of conducting the experiments for the solution of these problems. The Doctor's first step was to procure a specimen of foul-brood, which, on being submitted to microscopic examination, was found to have reached the spore condition. To ascertain whether these spores, when dry, would float in the atmosphere, and to catch them if they did, he constructed the following apparatus: On a smooth board he placed a bell-glass, in the top of which was a round hole; in this he fixed a glass tube two feet long. In a hole in the middle of the board he fixed a similar tube extending downwards. In the outer ends of these tubes he placed plugs of cotton wool loosely, so as to permit the passage of air, but tight enough to catch floating particles in the atmosphere.

Dr. Shoenfeld now placed the foul-broody matter under the bell-glass, and from time to time he exposed the glass to the rays of the sun in his study window. A circulation of air was thus set up, on the same principle that a stove "draws" when the fire is lighted. In about two weeks the foul-broody matter had become quite dry; every eight days or so he removed the plug from the upper tube and replaced it with a fresh one. Portions of these plugs, taken from the tube, were wetted with distilled water, when spores were found adhering to the fibres. When a drop of this water from the wool was examined under the microscope, it showed considerable quantities of spores. After examinations under the microscope, repeated so often that there could be no possibility of mistake, Dr. Shoenfeld considered the first problem solved; it being without a doubt proven that the spores from the dried-up matter of foul-brood escape, and are borne away by the atmosphere.

To solve the second problem, Dr. Shoenfeld fastened portions of the infected wool over healthy brood, and after some failures, caused by the bees throwing out both the wool and the larvæ covered by it, he finally succeeded beyond any doubt whatever in starting the disease of foul-brood. So there can be no longer any doubt that spores introduced from without infect healthy larvæ, and in the end kill them.

Dr. Shoenfeld says that when the putrid matter in a foul-broody hive becomes dried up, there is no doubt that the spores must be driven out in large quantities by the fanners at the en-

trance. When air is driven out of a hive, an equal quantity of outside air rushes in, and if this ingoing air should happen to contain spores from an adjacent hive, or elsewhere, we can see how the disease might be started in a healthy hive without the presence of either dead brood, contaminated honey, or stray or robbing bees.

The above is only a very imperfectly condensed description of Dr. Shoenfeld's experiments, a full description of which may be found on page 279 of the AMERICAN BEE JOURNAL for 1876. It is well worth while going to some trouble to borrow, if necessary, the November number of the AMERICAN BEE JOURNAL for that year, in order to be able to read Dr. Shoenfeld's description in full.

After reading all Mr. Robinson's claims to priority of discovery, the reader will now be more than surprised to learn that, previous to the announcement of his pretended discovery in 1882, Mr. Robinson was aware of Dr. Shoenfeld's experiments. Here is the proof: In the *Bee-Keepers' Exchange* for 1882, page 201, I find the following characteristic sentence over Mr. C. J. Robinson's name: "Shoenfeld, of Germany, was the first who demonstrated by experiment—infected healthy brood with foul, and thus discovered that the poison (not disease) is transmitted from hive to hive." In the *Kansas Bee-Keeper*, for the following October, he makes a similar statement. I have no space for comments on Mr. Robinson's inconsistencies.

I should close here, but as I shall probably not have another opportunity, there are two statements in Mr. Robinson's letters which I wish to discuss, not for the sake of refuting Mr. Robinson, for I have now done with that gentleman, but because I observe that the same ideas have been advanced by other writers.

The first statement is that foul-brood is not found to any extent anywhere except in cold climates. It is an old acquaintance in sunny Italy, as some who have imported queens from that country know to their cost. Mr. A. J. King had to battle with it in Cuba. It is found in Utah, California, Indiana and Texas, and Mr. Muth says "it has made fearful progress in the South." In Australia and New Zealand there seems to be more of it than almost anywhere else.

The second statement is that when bee-keepers practice freeing their hives of dead brood, foul-brood will be a thing of the past.

M. Bertrand, editor of the *Revue Nationale d'Apiculture*, an eminent authority, is reported as saying that "chilled brood has a great deal to do with spreading foul-brood. Chilled brood might exist without ever becoming foul-brood; but if there was chilled brood in a hive, and the conditions were favorable for the spores of foul-brood to get to it, then foul-brood would arise."

Mr. Grimshaw, a prominent contributor to the columns of the *British Bee Journal*, is reported as follows: "He quite believed in M. Bertrand's opinion, that chilled brood was very likely to result in foul-brood, and strongly advised that the brood-nest should not be disturbed in the sharp nipping time of Spring, but be kept well quilted. Brood that was decomposing just gave the very sort of soil which noxious bacilli, floating about in the air, were in search of—at least that was the opinion of bacteriologists. He should think that chilled brood was not a cause of the disease, but an accessory before the fact."

Mr. T. W. Cowan, editor of the *British Bee Journal*, writes: "I do not believe foul-brood can break out in any district if the germs of the disease are not present in that district; and it is only if the disease germs are in the district that chilled brood can form a nucleus for the spread of the disease. I am quite sure that in a healthy district, where the disease germs do not exist, foul-brood could not originate spontaneously, however much chilled brood there may be. I have known hives affected with foul-brood where there had been no chilled brood, and on the other hand apiaries perfectly free from it where large quantities of brood were chilled by incautiously spreading the brood in the Spring."

Some years ago Mr. D. A. Jones stated, at a convention, that he believed he could start foul-brood at will in any apiary, by decapitating the drone brood, and placing the combs containing the dead brood under a nucleus. He tried it in his own apiary later on, and failed, after doing everything he could think of to infect healthy larvæ by means of the putrid matter from the drone combs. He had the seed bed, but the seeds of the disease did not happen to be floating around in Beeton just then.

By keeping the hives free from dead brood, we shall avoid one of the means which assists the spreading of the disease, but if we rely on this alone for its extermination, we shall never be able to say that "foul-brood is a thing of the past."

Lindsay, Ont.

## Do Not Give Your Honey Away.

M. M. BALDRIDGE.

Friend Heddon says he thinks consumers of extracted-honey will buy just as much at 10 cents per pound, when sugar is worth 4 cents, as when it is worth 8 cents per pound.

That is my belief, also, because it is my experience. But I will state the case stronger: Consumers will buy and use just as much extracted-honey at 10 cents, 15 cents, or 20 cents per pound, when sugar is worth one cent, as when it is worth ten cents per pound! Why? Simply because honey is not used generally for the same reason, the same purpose, nor as a substitute. The price of sugar should have no more influence on the price of honey, than *tard* has on the price of *butter*.

I do not see as the price of cane sugar, or cane syrup has any influence on the price of maple sugar, or maple syrup, when pure. Why? Because they are not used for the same purpose, nor for the same reasons, generally. Consumers use honey, maple sugar, and maple syrup for precisely the same reasons, so far as my experience goes, namely, the peculiar *flavor* they each possess.

Take away from honey, or maple, its peculiar flavor, and consumers would just as soon have cane syrup for table use. They would, in fact, prefer cane sugar to honey, or maple, for cooking or preserving purposes, at the same price per pound, and simply because cane sugar is richer in saccharine.

It is my belief that all who claim that the price of cane sugar should or will effect the price of honey, whether in the comb or extracted, have not yet learned how to present the facts about honey to consumers. It might pay them to serve an apprenticeship in the art of selling honey, with some one who is an expert at the business. They might then, perhaps, be surprised to learn how simple and easy it is to sell honey, especially extracted, to consumers at 15, 20, and even 24 cents per pound. The latter has been my price for the past six months, and I still adhere to it, notwithstanding the price of cane sugar has been reduced 2 cents per pound since April 1.

As a rule, I do not sell honey to consumers by the single pound, but only in 5-pound packages. Five pounds is my smallest package, and 10 pounds, or two packages, is the largest quantity I



will allow any consumer, or family of consumers, to have at one time.

The gross weight of each package is  $5\frac{1}{2}$  pounds, and net weight 5 pounds. My price, without any exception, is \$1.30 for the entire package, to rich or poor, white or black; but I give my patrons 10 cents for each empty package, if returned to me on day of delivery.

The package I now use, and have used for ten years or more, to hold my honey, is simply the common so-called 2-quart tin pail, with loose cover. This package answers every purpose for my family trade, and I ask for nothing better.

Many honey producers are surprised to learn that I am able to get 24 cents per pound for extracted-honey, when they have hard work—so they say—to get even 10 cents per pound, and they sometimes insinuate that I must deal with a very ignorant class of people. On the contrary, my very best patrons are the average in intelligence. They have sense enough, however, to know a first-class article of honey when they see it, and seem willing to pay me the price I ask for it.

St. Charles, Ills., April 11, 1891.

## Managing an Apiary for Surplus Honey.

T. K. MASSIC.

I have given this matter considerable thought, and I would rather be called a thinker than a "hustler," but my friends often give me the latter name. I wrote the following for the *Farm and Fireside*, but I feel sure that it will interest many readers of the AMERICAN BEE JOURNAL, and so will give it to them:

In running an apiary for large yields of surplus honey, the first thing we want at the beginning of the honey flow is bees. We want to know how to have our hives literally "boiling over" with bees, for it requires bees to gather the nectar from the flowers. To get the bees at the proper time, we must have a prolific queen—one whose reproductive powers, or egg laying, we can manage to suit the time of our honey flow. We must also see that our bees are well supplied with plenty of stores, both honey and pollen, in early Spring, and well protected from the cool nights and early frosts by keeping the hives well protected with chaff or other suitable material.

As the danger of chilled brood from cold snaps begins to pass, we must com-

mence to spread the brood-nest by inserting an empty comb in the middle, using caution lest we get ahead of the bees, and cause them to get more brood than they can protect in case a cool spell should set in. In a few days take the two outside frames containing brood and put them in the center, placing the two center ones on the outside. Repeat this a few times, and when all danger of chilled brood is past, take the frames containing the most brood and put them next to the sides of the hive, placing those containing the least brood in the center.

If there are not enough stores, feed a thin syrup made from granulated sugar. Place rye flour where the bees can have free access to it. They will carry this in, which answers for pollen in brood-rearing.

When the honey flow sets in, which is known by the bees commencing to whiten their combs along the top-bars, reverse your frames, and put on your sections, with starters or partly-built combs for "bait." If bees refuse to go into the sections, fill a section with comb containing drone brood, and place this in the center of your super. I know all this is not new, but the proper management during swarming time is where the main surplus crop is secured.

When I first commenced keeping bees I read in the bee-books and periodicals that when bees swarmed we must secure as many foragers with the swarm as possible. This was accomplished by moving the old hive to one side, turning it half way around and putting a new hive in its place, when a swarm issued. Every day the old hive was turned a little, so that on about the sixth day it faced in the same direction as the new hive containing the swarm. At about 12 o'clock, when as many of the bees were out as possible, the old hive was carried to a new location, so that the returning foragers would enter with the swarm.

This required too much labor, and I adopted a plan requiring no hiving-boxes or other swarming implements, giving much better results, and requiring much less labor. I clipped the wings of all my queens, and when a swarm issued, I caught and caged the queen, moved the old hive a few feet to one side, and placed a new hive in its place. I then took the super off the old hive, using a little smoke, of course, and set aside. I next took off the honey-board, and lifted out the two outside frames from each side of the brood-nest, with their adhering bees, and placed them in

the new hive, breaking off all queen-cells, and again reversing the frames.

I then filled in between these four frames, four other frames (an eight-frame hive is best), filled with foundation, put on the honey-board and a new super of sections filled with foundation, and on this super I placed the super from the parent colony (old hive), and covered them up. By this time the swarm was returning, when I released the queen and let her run in with the swarm. I had them swarmed and hived at one operation, with very little labor, and the result was more honey from the swarm than under any previous management.

The object in putting into the new hive the four frames from the old one was two-fold. First, to get the working bees with the swarm; and second, to so reduce the strength of the parent colony that I would not be troubled with after-swarms—swarms issuing with virgin queens, the wings of which I could not clip, as they had never mated. I then carried the old hive to a new location, taking care of the queens as they hatched out, and giving frames as needed, so that the old colony built up strong and in good condition for Winter.

Last season when my first swarm issued I was away from home. My wife moved the old hive to one side, put a new one in its place, gave the swarm four empty combs, and left them thus until I could return and "fix" them.

I returned about sunset, and when I opened the hive I found a vast number of the cells on all the combs pretty well filled with the honey that the bees had brought in their sacs from the parent colony. Here was a valuable lesson accidentally learned. "If those bees had been given frames solidly filled with young brood or sealed honey, and only starters in the other frames, so that *not one empty cell* could have been found in the brood-nest, then they would have been compelled to deposit the honey in their sacs in the sections, and thus the *habit* of going 'up-stairs' would have been induced, which would have been kept up until the end of the honey flow."

This was my reasoning. I then changed my system to suit it. When my next swarm issued, I hived it on the plan given above, except that instead of giving them the outside frames, and frames of foundation, I selected four frames containing eggs or very young brood, or sealed solid with honey, and placed between them four other frames with  $\frac{1}{2}$ -inch starters. It would be several days before any of the brood would

hatch, and as fast as the bees built comb from the starters the queen was ready to deposit it full of eggs.

In one hour the bees were working lively in the sections, just as I had calculated they would, and kept working in the sections to the end of the season. This plan works to my entire satisfaction with the invertible, hanging frame. In using the invertible and divisible hive, with closed-end frames, a slight change in the above plan would have to be made.

Now, why fuss with "swarming boxes" and other expensive, unnecessary and annoying implements, and then be mortified at having your surplus crop cut short, and your best queens and most valuable swarms abscond, when an inexpensive and much better plan can be adopted—one that will require much less labor, save the climbing and cutting of valuable trees, the loss of fine queens and swarms of bees, and *give more honey?*

Concord, W. Va.

## Apicultural Notes from Alabama.

EDWARD CLARK.

Drones were flying on April 7.

The apple and peach trees have been in bloom for several days.

The bees are gathering pollen and honey from maples, which have been in bloom since the early part of March.

The persimmon tree, which blooms from the latter part of May until late in June, is, I think, a very good honey-producer.

After the persimmon, the sourwood blooms, and continues in blossom until the middle of July; and following that the poplar, or tulip, blossoms.

There are numerous other trees and plants, from which the bees can gather honey and pollen, almost any time through the summer.

We have very little basswood or clover but sumac and golden-rod are quite plentiful, and there are many other flowers that yield honey.

I would like to ask, of what value is the sourwood as a honey-producer?

Nat, Ala.

[Of the sourwood, or sorrel tree, Prof. A. J. Cook says: As a honey tree, it is very highly esteemed; in fact, it is the linden of the South.—Ed.]

## Uniformity of Honey-Sections.

DR. C. C. MILLER.

Your editorial advocating one size of sections, rings out no uncertain sound. I hope you may secure a full presentation of both sides, but in order to overcome difficulties, it is well to look them squarely in the face. So I will make mention of what occurs to me in the way of difficulty or objection.

Suppose the edict goes forth that a certain section is to be considered standard, and anyone who varies from that will be out of style. It may happen that the section that I am using differs a trifle from the standard, yet all my fixtures, hives, supers, etc., are arranged with reference to that size, and it will be difficult to get me to change them all for no other advantage than to be in the fashion. So large a number would be in this predicament, that the adoption of a standard would be no easy matter.

One who has never tried it has no idea of the trouble attending a change of size. It is a very common thing, and a very correct thing, to urge beginners to avoid having more than one kind of hive in the same apiary, and much the same argument will hold against more than one kind of section. For it is easily seen that the man who has been using a section of a certain size, will for some time be likely to have some of that size on hand after he changes to the standard.

But are there not some hives that in their nature demand a certain kind of section, from which it is almost impossible to change?

Some markets demand one thing and some another. Now, ought you to ask me, for the sake of uniformity, to make a change that will take money out of my pocket? If a two-pound section sells better than a one-pound—as we are told it does in some markets—and the bee-keeper feels convinced that he can get more pounds of honey in the larger size, it will be difficult to get that man to fall into line.

Again, would not the adoption of a standard size largely bar the way against future progress? If, to-day, some one finds out a shape or size of section manifestly superior to anything else in use, it may be adopted by a number at once, and gradually work itself into the position of greatest popularity. On the other hand, if only one section were in universal use, it would be almost impossible to make any change.

Bee-keepers are great for hobbies, and pretty strong in their prejudices. Smith is sure his section is better than Brown's, and Brown is equally sure that Smith's is inferior. If either one is adopted, is it likely the other will change? If that be universally the case, what difference will it make to adopt a standard? Will it be any more a standard than it is now, except in name?

Now, I have suggested these objections, and others will no doubt arise—how shall they be met?

Marengo, Ills., April 10, 1891.

[The fact that the regular size can be made and sold *cheaper* than odd sizes, will very materially assist in bringing about a uniformity in size. Nothing teaches a lesson more impressively than a financial argument, especially when that is illustrated by an every-day, practical experience. Odd sizes of sections cost the honey-producer one dollar per thousand more than the regular sizes. That money is simply thrown away.—Ed.]

## Apicultural Notes from Nebraska.

J. M. YOUNG.

Have you got your supplies in readiness for the first honey harvest?

Bees have wintered well in this locality. I have lost one colony out of my entire number.

Do you take a bee-periodical? If not, you should subscribe for one at once. A good, progressive bee-keeper cannot get along without one.

Bees should be fed a little now, every day they take a flight; if for nothing else, it will encourage brood-rearing, and keep the colony in a healthy condition, and when the honey harvest comes, you will have plenty of workers to bring in the nectar.

For several years I have used a thick top-bar for my brood-frames,  $\frac{3}{4}$  of an inch thick, and even at this thickness my frames seldom ever sag—at least not enough to amount to anything, but perhaps the thick top-bar advertised so much, will be better. I shall try some of them this season.

The hives in my apiary are about 8 feet apart, each way, and in rows. Usually, I level up my hives perfectly, every Spring. A novice will perhaps ask

why we are so particular; well, just put a frame of foundation in a hive that is not level, and then note the difference.

Now is the time to prepare something for the World's Fair, at Chicago. Every State in the Union should do its level best to be represented there, and show to the world what can be done for the "little busy bee," that improves every shining hour. Commence *now* to prepare something fancy.

While the Spring will be late in this latitude, the indications are that a good honey season is before us. Plenty of snow in March, and some rain, has made the ground so wet that an abundance of early flowers are expected. White clover will certainly afford a good harvest this year.

Scarcely a single pound of comb-honey is obtainable in our city at present—in fact, there has been but little on the market all Winter. My crop of this article was all sold early in the Winter, and but little has been shipped in from other places.

Very little extracted-honey is used, except what is sold by peddling from house to house. Comb-honey is sold in 1-pound sections, and extracted-honey is put up in 1-quart fruit-jars, and a little in cans.

Plattsmouth, Nebr., April 13, 1891.

### Comb-Honey and Out-Door Wintering.

GEO. H. KIRKPATRICK.

As many of the readers of the BEE JOURNAL are, perhaps, undecided as to what hive, or what make of hive they will use the coming season, a few words on this subject may be of interest to them.

It is an undisputed fact, that most apiculturists who are keeping bees for profit, demand a cheap, simple, practical hive. Shall this be a single-walled or a chaff hive, and shall it contain 8 or 10 Langstroth frames, is a question not so easily decided.

If the single-walled will do and 10 frames are wanted, then the 10-frame Langstroth hive is, perhaps, the right hive. If only 8 frames are wanted, then we need look no further than the dovetailed hive.

Now, either of the above hives are practical, but they must be protected, if wintered out-doors, or, if in the cellar, Spring protection is needed. It has been suggested by Ernest R. Root, of Medina, Ohio; R. F. Holtermann, of Romney,

Ont.; and others, that an outside case be made for the purpose of protecting single-walled hives in Winter, but some predict that such cases will never come into general use.

Well, what about chaff hives? I think this heavy, expensive chaff hive, such as has been on the market for years, with heavily packed walls, requiring two men to move one, on account of the great weight and bulk, will never become popular with the majority of bee-keepers, although, by many, bees are reported to winter very well in them. But who will say that they are good hives for comb-honey? In my experience, I have found them very poor.

The thick, heavy walls retain the heat of the colony, and when the mercury is standing at from 85° to 100°—which



is a very common temperature during a good honey-flow—the bees are driven from the hives to prevent the destruction of the combs.

Why, it seems to me that such thick walls are worse than useless, as they prevent a free ventilation of the hive in Summer, and also prevent the warmth of the sun from reaching the bees in early Spring. And this warmth I consider quite an advantage, especially after brood-rearing has commenced.

Another objection to this heavy chaff hive, is its double-bottom. By a thorough test for a series of Winters, I have proven to my own satisfaction, that a double-bottom is useless; for if the hive rests as near the ground as it should, the packing will become damp; when if a single  $\frac{3}{4}$ -inch board is used, the hive bottom will remain dry, other conditions being right.

As I have now spoken of three different hives, and mentioned a few points which seem to me as not being altogether practical, I will give a short description of my 8-frame chaff hive:

This hive I have used for four years, and it has proven to be complete in every respect, especially for comb-honey and out-door wintering. It is arranged with a 2-inch space around the brood-chamber, which may be packed, or left unpacked—I prefer it unpacked. This hive is a very easy one to handle, weighing less than a two-story Simplicity, and it is arranged with handles on each end, which are very convenient. (See cut above.)

I make this hive to receive the dovetailed furniture, although it will receive any of the standard surplus arrange-



ments in use. In order that I may make it light and strong, I build it of re-sawed lumber, and secure the corners by first nailing the siding to a corner-post and then clamping the corner still more solid by an outer corner-post sawed in an L shape, and nailed on the outside. The bottom is made of a single  $\frac{1}{4}$ -inch board; the roof is made of re-sawed lumber, and covered with tin.

This hive has a side opening on the right-hand side, which lifts out half way down, or from the upper story only. In preparing a colony for Winter in this hive, the apiarist has only to see that the colony has plenty of honey, and then place a Hill's device on the brood-frames and tack a piece of burlap over that, then crowd down a good chaff cushion into the burlap, and the work is done.

I sometimes make a box, of re-sawed lumber,  $4\frac{1}{2}$  inches deep and large enough to cover the brood-chamber, and stretch and tack a piece of burlap over the bottom, fill it with chaff and place it on top. This answers very well, but not as well as a cushion.

Union City, Ind.

### An Idea Worthy of Consideration.

F. H. DEWEY.

Mr. A. N. Draper said at Keokuk: "People have had a good deal to say about keeping bees away from watering troughs. I will give you a secret that is worth them all: Take a weak solution of carbolic acid, and paint it around the edges of the trough, and then the bees will not bother your neighbors." This is recommended for experiment by the editor of *Gleanings*.

Hereupon the question arises, have we not a means, deducible from this hint, to check, if not prevent, robbing? When robbers are rampant, why not lay a piece of cloth, saturated with a solution of carbolic acid, along the alighting-board?

Will not inhabitativeness take the inmates past it, while it offends the senses of the intruders? The strength of the solution might depend upon the temper of the thieves.

When the honey-fumes from the hive are overcome, and the victimized colony recovers its equilibrium, this mischief dies. In this connection it might be well to add that the queen of a thievish progeny—bandits, pure and simple—had better be marked for execution, and superseded before another season.

If a colony appears only liable to be robbed, an application of carbolic acid, of strength determined by test, might avert a sacking of the treasury. A looting of the hive would be more offensive than the fumes, and its use would not interfere with the hive work, as robbing is a sign and proof of idleness, as well as viciousness. Furthermore, we might ask, would a careful use of the acid, at the time of removing honey, be a safeguard against impertinent bees.

The possible advantages are worth a little experiment. Besides, the acid is a specific for sores and cuts, and for poultry vermin. In addition, it is a reliable disinfectant, but is poisonous if taken internally, like white paint and some other materials in common use.

Westfield, Mass.

### Transferring from Box to Frame Hives.

L. HIGHBARGER.

I have noticed several inquiries in the *BEE JOURNAL* of late concerning transferring, and how and when to do it. I have done considerable of it, both on the Langstroth and Heddon plan, but I do not like either of them.

In the Langstroth, there is always too much brood destroyed in fitting the brood in the frames—that is, cutting the combs out and placing them in the frames—and in the second place, where there is honey, as there should be, it makes a smeary, disagreeable job, and if the greatest care is not exercised, it will induce robbing.

In the Heddon system I find that the old colony will cast a swarm nine times out of ten, if there was much brood at the time of drumming.

Mr. Heddon says that in 21 days after first drumming, you can drum again, as the last bee will be hatched. The worst trouble will be with the queens that will be hatched before the last bee is—that will cause a swarm to issue.

My way of transferring is easier, quicker, prevents swarming, and avoids the smearing of honey. Take a movable-frame hive, with nice, clean combs—if you do not have the combs, take full sheets of foundation to fill out the hive—cut a hole in the bottom of your frame hive the size of the inside of your box-hive, or old gum. You need a hammer, a chisel, and a long, thin-bladed knife.

Blow some smoke in the entrance of the old hive, take your chisel, gouge the wood from the nail-heads, and with the

pincers draw the nails out; pry the top loose, so that you can get your knife in, and cut the combs loose from the top. Place your frame hive on top of the old hive or gum, close its entrance, and your work is done. It should not require more than half an hour.

In about ten days, examine the frame hive to see if the queen has gone up; if not, and the old hive is full of bees, give them a good smoking. Whenever you find sealed brood in the frame hive, you may know the queen is there. At any time during the Summer you can take the box-hive away, and put the frame hive in its place. Examine the combs in the box-hive, and if they are worth transferring do so, but if not, melt them into wax. Do this transferring at any time during the Summer, when your bees are strong.

Leaf River, Ills.

### Texas State Bee-Keepers' Convention.

A. H. JONES.

The thirteenth annual session of the Texas Bee-Keepers' Association convened at the apiary of W. R. Graham, Greenville, Tex., April 1, 1891.

The convention was called to order by President Graham, at 10 a.m., with about 20 bee-men present.

Prayer was offered by Rev. I. H. Hightower, of Kingston.

The minutes of the last meeting were read and approved.

In a neat, fraternal speech President Graham bade the convention welcome to his home and hospitality.

Rev. A. Fitzgerald, of Emory, and Rev. I. H. Hightower, of Kingston, addressed the convention, giving their experience, observation and ideas of bee-culture.

A letter was read from Dr. Wm. R. Howard, of Ft. Worth, the first Secretary of the association, expressing his regrets at not being able to attend the meeting.

A committee was appointed by the President to draft suitable resolutions, in memory of Hon. W. H. Andrews, the first President of the association, who died last August at his home in McKinney. The committee reported the following, which was adopted:

Hon. W. H. Andrews, of McKinney, was the first President of this association, which was organized in Greenville, Texas, July, 1878. He was recognized as a leading authority in bee-culture,

and no man stood higher in the profession. He was gentlemanly and courtly toward all with whom he came in contact; a genial companion and true friend. As a lawyer he stood in the front rank of the profession. He departed this life Aug. 6, 1890, at his home in McKinney, Tex., after a painful and lingering illness; therefore

*Resolved*, That we, the Texas Bee-Keepers' Association, do deplore the untimely fate of our departed friend and brother, cut down in the prime of manhood and usefulness; and

*Resolved*, That we tender our sincere sympathy to the bereaved family.

*Resolved*, That these resolutions be spread on our minutes, and a copy sent to the family.

JAS. N. HUNTER,  
I. N. HUFAKER,  
GEO. A. WILSON,  
Committee.

Reports of bee-keepers present showed that the industry was advancing in this State, and that bees have wintered well, and are in good condition at this date. The yield during the past year was satisfactory, the average being about 40 pounds of honey per colony.

The following topics were discussed with animation, and proved very interesting and instructive to all present:

"The best hives." "Queens—rearing and introducing." "Honey—comb and extracted; marketing, etc." "Swarming, dividing and transferring." "Enemies of bees, and how to protect the bees." "How to make bee-culture profitable."

The session extended over two days, with one evening session, and during intermissions President Graham gave the members free access to his large factory.

The election of officers resulted as follows:

President, William R. Graham, Greenville.

Vice-President, George A. Wilson, McKinney.

Secretary, A. H. Jones, Golden.

The session was extremely pleasant and profitable to all present, for which the thanks of the members are due to Bro. Graham and his excellent family.

The next meeting of the association will be held the first Wednesday in April, 1892.

Golden, Texas.

Clubs of 5 New Subscriptions for \$4.00, to any addresses. Ten for \$7.50.

**CONVENTION DIRECTORY.***Time and place of meeting.*

1891.  
 May 6.—Ionia, at Ionia, Mich.  
           Harm. Smith, Sec., Ionia, Mich.  
 May 6.—Central Michigan, at Lansing, Mich.  
           W. A. Barnes, Sec., Lansing, Mich.  
 May 6.—Bee-Keepers' Ass'n and Fair, at Ionia, Mich.  
           Open to all. Harmon Smith, Sec., Ionia, Mich.  
 May 7.—Susquehanna County, at Montrose, Pa.  
           H. M. Seeley, Sec., Harford, Pa.  
 May 13.—Western Connecticut, at Watertown, Conn.  
           Edward S. Andrus, Torrington, Conn.  
 June 2.—Des Moines County, at Burlington, Iowa.  
           John Nau, Sec., Middletown, Iowa.

**[3]** In order to have this table complete, Secretaries are requested to forward full particulars of the time and the place of each future meeting.—THE EDITOR.

**North American Bee-Keepers' Association**

PRESIDENT—P. H. Elwood....Starkville, N. Y.  
 SECRETARY—C. P. Dadant.....Hamilton, Ills.

**National Bee-Keepers' Union.**

PRESIDENT—James Heddon...Dowagiac, Mich.  
 SEC'Y AND MANAGER—T. G. Newman, Chicago.

**Bee and Honey Gossip.****Perfectly Delighted.**

I bought 30 colonies of bees last Spring for \$87.50, and they increased to 52 colonies, but I got only 250 pounds of surplus honey. The drouth and some mismanagement on my part were the cause. Now I have everything ready for the honey crop, and I have never seen the prospect better for a large yield. I have in use the Globe bee-veil and Bingham smoker, and I am perfectly delighted with them. I would not be without them for twice their cost. The BEE JOURNAL comes promptly every week, and I read it as soon as it is received.

S. B. BOWIN.

Lee's Summit, Mo., April 14, 1891.

**Langstroth Frames.**

My honey crop for last season was 1,000 pounds of comb in one-pound sections from 19 colonies, Spring count, and 7 increase. From those 26 colonies in the Fall I have lost one by starvation, and two others are so weak that I consider them the same as lost. Nearly all will require feeding. Bees have done

nothing yet here, the mercury standing from 10° to 14° below freezing for several mornings past. Last year the first pollen was gathered April 12, and the latest date of the first pollen gathered since I have kept bees was April 26.

1. How wide and thick do you advise the top, bottom, and end-bars made for the hanging Langstroth frame? 2. How far apart should the top-bars be spaced?

O. P. MINER.

Taylor Centre, N. Y., April 8, 1891.

[1. In an ordinary Langstroth hive the bottom-bars are  $\frac{1}{4} \times \frac{1}{4}$  of an inch; the end-bars are  $\frac{3}{8} \times \frac{1}{4}$  of an inch; the top-bars are  $\frac{1}{8}$  of an inch and triangular. In the 8-frame dovetailed hive, the deep top-bars are used; they are 1 inch wide, and  $\frac{1}{8}$  of an inch thick.

2. The distance from center to center is a little less than  $1\frac{1}{8}$  inches.—Ed.]

**Money Well Spent.**

I have received replies from as far west as Oregon and east to Maine, from Ontario on the north, and Texas on the south, and that in less than three weeks after the appearance of the advertisement, which, I think, pretty conclusively demonstrates the value of the AMERICAN BEE JOURNAL's advertising columns, as well as the wide range of its circulation. Persons wanting anything in the apicultural line, should advertise in its columns.

J. W. TEFFT.

Buffalo, N. Y.

**Ventilating a Bee-Cellar.**

I put 26 colonies into Winter quarters, tiered up three deep in the bee-cellar, covering the roof with sand, to prevent freezing. They were all right as long as the weather continued cold, the mercury ranging from 40° to 43°, but when the ground thawed out in the Spring, and heavy rains kept the soil damp, the cellar became mouldy, and the bees began to dwindle very fast. When I took them out of the cellar, on the 10th inst., I found that 2 colonies had died of starvation, although when putting them in the cellar I left from 15 to 20 pounds of honey in each hive, but the 2 colonies that died I found were very large. I have lost 2 weak colonies by robbing. In order to ventilate my cellar, and prevent the mice from getting into the hive, I proceeded in the following manner: I made a box 4 inches

deep, something like a super, then cut an opening 3 inches wide and a foot long on each side, at one edge, leaving the remaining one inch on the other edge. This box I placed on the hive bottom, and nailed it there, with the opening down; tacking wire screen cloth over the opening, on the inside of the box, and down onto the bottom. On this box I placed the hive, and, being the same size, it left the opening above referred to for ventilation. All who have seen the bees say they are doing extremely well.

J. M. STRAIGHT.

Necedah, Wis., April 15, 1891.

#### Pollen from Pumpkin Blossoms.

Last year was a very poor season for honey gathering. In June and July it rained almost continually, and afterwards we had such a drouth that the bees would not gather a pound of honey in a week. Bees have wintered well in this locality. I have not heard of very many being starved to death. Mine wintered well so far, as the Winter has been very mild. I wish some one would tell me whether bees gather much pollen from the blossom of the pumpkin vine. I have watched the bees in the early morning about sunrise, when they would come to their hives all covered with a light yellow substance. Those coming home were yellow, and those going out were black. When I watch my bees laboring in the hot Summer sun, and hear them buzzing, I think their song is:

We're a band of happy workers,  
We hate an idle drone;  
We will work while we are little,  
We will work when we are grown.  
There's room enough for all of us,  
If we are good and true,  
And the world will be the sweeter  
For what we workers do.

JOHN PAULSEN.

New Hall, Iowa, April 10, 1891.

#### Strong Colonies.

My bees were never stronger at this season, than now. Heavy rains cause us to be hopeful of a good honey harvest the coming season, as the ground is in better condition than for two years previously, at this time. This locality was visited by a heavy hail storm last evening, but no damage to fruit resulted, as the buds were not far enough advanced.

HENRY PATTERSON.

Humboldt, Nebr., April 18, 1891.

#### Heavy Loss by Starvation.

I took my bees out of the cellar the 12th inst., and out of 17 colonies I have 10 left, in good condition. The colonies that died were new, and scarcity of stores was the cause. I hope the coming season will be better than last. It is raining to-day, and the prospect is good for fruits and clover.

L. HYATT.

Rochester, Minn., April 14, 1891.

#### Damaged by Hail.

We were visited by a severe hail storm yesterday, which stripped nearly all the buds from the peach trees, and a great many of the buds from the apple and cherry trees. As the peach trees were just beginning to bloom, they suffered the most. The hail stones knocked the bark from the tender trees, and broke thousands of panes of glass. Clover looks well now, but the weather has been very cool this Spring. Bees are breeding slowly, and my loss from dwindling will be quite heavy. One colony now has the ague.

N. M. HOLLISTER.

Springfield, Mo., April 10, 1891.

#### Bees are Booming.

Bees are booming in this locality. I received the Globe bee-veil in good order. Am well pleased with it, and think it the boss veil.

JOHN Q. HILL.

Prophetstown, Ills., April 17, 1891.

#### Could Not Give Up the Bees.

Last Tuesday being clear and warm, I thought it was time to take my bees from the cellar, so my son and I took the two-horse wagon to the farm, that we left last month, for my bees (having sold the farm, but I could not give up my bees, if we did live in town). We put on the side-boards, and nearly filled the box with hay, and then put the hives on that, crosswise of the box. I first tacked some screen-wire over the entrance to the hives, and over openings in the honey-board, which I use in preference to canvas, then put on the cap, and nailed cleats on both sides of the hive, to both hive and cap, to keep the cap in place. We put in 6 hives, packed them in solid with other things that we had to move, and started on our 10-mile drive, over the roughest roads that I ever traveled. It required  $4\frac{1}{2}$  hours to drive that distance, going slow so as to jar the bees as little as possible. I have



taken the AMERICAN BEE JOURNAL for 2 years, and am satisfied that I cannot do without it as long as I keep bees. It is a great pleasure to read the letters from Mrs. Harrison, and other lady bee-keepers.

Mrs. G. W. MORRISON.

North English, Iowa, April 10, 1891.

### Mildew and Dampness.

Last Fall I put my bees in a cave, and they wintered very well, I think, but on looking into the hives I find some of them have mold, or mildew, in the lower part, and on some of the frames it extends to the top. Now, I would like to know if it will injure the bees? What can I do to get rid of it? Also, what caused it, and what can I do to prevent it in the future? Please answer these queries at your earliest convenience.

FRANK WHELOCK.

Stevens Point, Wis.

[The mildew was caused by dampness, but it is not detrimental to the bees. Let it alone, the bees will "clean house" in due time, and will do it better, cheaper, and more thoroughly than you can.—Ed.]

### Better than was Expected.

On Dec. 1, my bees were put in the cellar in Pickering, where they remained until March 10, when I selected 7 of the best colonies and sold the remainder. These 7 colonies I nailed up and loaded on the cars, on the latter date, and they arrived here on March 12, and were again put in the cellar. To-day I took them out, and found that one colony had starved to death, and one had lost their queen, but was strong in bees. The remaining 5 colonies are in as good condition as I ever had bees at this date, although I did not expect to have one colony alive after such treatment. The weather was such that they have not taken a flight from the time they were first put in the cellar until to-day.

J. BAXTER.

St. Paul's Station, Ont., April 6, 1891.

### Losing Their Bees.

My bees have wintered well, considering the condition they were in when placed in the cellar, on Dec. 5. I took them out on April 11, and found 9 colonies dead out of 173. A number of colonies are weak, and will doubtless

die before May 1. My bees began flying the day they were taken from the cellar, and before night were bringing in pollen. Clover looks well, in this part of the county, and we had a nice rain on April 12, which will start it to growing. Bee-keepers in this county did not get much surplus honey the past season, and those distant from timber got scarcely any honey at all. My crop was 4,000 pounds—about one-half comb-honey, in one-pound sections, and the remainder extracted. Farmers in this locality who keep from 5 to 20 colonies of bees, and who say they have no time to "monkey" with a bee-periodical, bees, or what others write, etc., are losing their bees.

Oswalt, Iowa.

WM. PEARSON.

### Honey-Comb Bee-Feeder.

Last Winter I kept my bees in a shed, and on examining them Feb. 1, I found they were dying in great numbers, and concluded that dampness was the cause. It being a warm, sunny day, I aired them well, nailed some boards on a fence, placed the hives on a platform on the south side of the fence, covered them with boards, and, so far, have lost but one colony. They are destitute of stores, and I am feeding them with sugar syrup, placed in the top of the hive, using some old comb as a feeder, and think it is as good a feeder as I can get. Will some of the readers of the BEE JOURNAL please inform me how to transfer my bees from box-hives to dovetailed hives?

A. J. BUSS.

Belmont, Wis., April 9, 1891.

[You will find, on page 472, an article detailing the method of transferring practiced by Mr. James Heddon; also, on page 545, an article by Mr. Highbarger. These will, no doubt, furnish the desired information.—Ed.]

**Very Well Pleased.**—The Sewing Machine and Scales are received in good order, and I am well pleased with them. They do good work. The sewing machine is ornamental as well as useful. The scales are very handy for family use.—G. RUFF, Burlington, Iowa.

**We Club** the American Bee Journal and the Illustrated Home Journal, one year for \$1.35. Both of these and Gleanings in Bee Culture, for one year, for \$2.15.

## Wavelets of News.

### Cloth Instead of Tin for Hive Covers.

Some styles of bee hives are so large that the covers must be made of more than one piece. To prevent leakage, they have been covered with tin. This is expensive, and some bee-keepers have been trying heavy cotton cloth instead of tin. The cover is first painted, then the cloth laid on, and another coat of paint put on over the cloth.—*Review*.

### Plants, Trees, and Honey.

The old Scotchman said to his son, "Plant a tree, Jack, for it will be growing while you are slaping." This is good advice for all to follow who own an acre of land. I know that tree planting has been discouraging of late years, but try again. Our Early Richmond cherries bore about fifteen years after planting, and the bees fertilized and enjoyed the bloom, and we the fruit, and the delight of seeing them bud and blossom, and hanging with beautiful fruit. A German passing by, stopped his horse, and raising his hands, said, "O, mine Got, how purty!" Cherry trees are valuable for bees, as they bloom early, before the apple, and stimulate bees to brood-rearing for the clover harvest.

For the past two seasons our bees have enjoyed the luxury of peach honey, and we the fruit. Our trees are seedlings, and cost nothing but the planting. A friend inquired, "How did you come to have peach trees?" I replied, "We trusted in God and planted the stones." O, the luxury of shaking down the luscious peaches ripened upon the trees. Plant peach trees and place in their shade a colony of bees to gather the honey, fertilize the bloom, and protect the fruit, when ripe, from thieves. Peach buds are all right so far in this locality.

We can do without all other fruit better than the apple, and when the tree is good for nothing else, it will be excellent fuel to burn in the smoker to tame the bees. Eternal vigilance is the price of a good apple, and we must study its habits, friends and enemies. The honey bee must produce fine fertilizations in order that an apple may grow to perfection. The bee is the apple's best friend, and should not be destroyed along with its enemies by spraying with poison while in bloom. The spraying is lost,

too, for the enemy has not arrived. Wait until the bloom has fallen, then spray your trees, and you will kill your enemies, and not your friends.

If there was any plant that I would recommend for honey alone, it would be the raspberry; it continues in bloom for three weeks, and a peculiarity about it is, that bees will be working upon it immediately after a hard shower. The heads hang down, and the rain does not wash the honey out, and it apparently secretes honey while it is raining. All of the small fruits produce honey more or less, and need the assistance of the bees to insure a crop.—*MRS. L. HARRISON, in the Prairie Farmer.*

### Bees, Not Honey, in the Spring.

It is bees, instead of honey, that we need in the hives in the fore part of the season. Too many stores in May and June will just as surely spoil a colony for section honey, as it will to keep the bees so short of stores that they keep their brood in check all the Spring. There is no such thing as having the combs full of honey during the forepart of the season, and then having the sections filled with clover honey.—*G. M. DOOLITTLE, in American Bee-Keeper.*

### Educate the Children Correctly.

In the Third Reader of the Indiana Educational Series, on page 134, are some statements that should be corrected. It says, "We commonly speak of bees as gathering honey. This is not exactly correct. They make honey out of what they gather from the flowers."

Now, I believe it is generally admitted that bees do gather honey from the blossoms, and that they cannot be said to make honey, any more than a man can be said to make corn, when he goes into the field to gather it for the crib. Further on it says: "But the bee cannot always find such nice food, and then he flies off to the fields, or perhaps helps himself to the drainings of some molasses, or to the dregs of some sugar cask. Honey made from these things does well enough for the bees' Winter store, but it does not suit our taste."

It does not suit our taste, because it is simply molasses, or sugar syrup, and all the bees have done was to carry it to their empty combs. As for its doing well enough for the bees' Winter stores, that might be true if it was a good grade of sugar, but if molasses or a cheap grade

of sugar, it would be very unsafe Winter food. I believe it is very desirable that some safe reliable information upon the rudiments of apiculture should be given in the readers in our schools.—A. C. BUGBEE, in the *Indiana Farmer*.

[While revising the above-mentioned text-book, it would be well, also, to give to the honey-bee the correct gender, as the worker-bees are not males. The only males in the colony are the drones, which do not gather honey, nor do any work whatever.—Ed.]

### The Apiculturist.

The April number of this periodical is adorned with an artistic cover and inside title. It is, as usual, filled with valuable reading matter. Here are a few of its items on queen-bees:

Imported queens are very dark, and their progeny resemble American hybrid Italians.

So far as our experience goes in importing queens, we are free to say that our foreign friends do not thoroughly understand the art of rearing them.

The best queen-bees produced are reared by American bee-keepers. They excel in points of color, size and purity, as well as in honey-gathering qualities. Is this saying too much for us?

A queen-bee is very tenacious of life. We have sometimes injured the head, or other parts of their bodies, and have seen the queen turn over, apparently dead, but in a few moments they would revive and come up as lively as ever.

Then, again, a good queen rarely, if ever, skips a cell; the inferior queen will "jump" a good many. It seems to us that even the novice can judge of the quality of a queen, if these simple rules are observed.

When a queen commences to lay, she deposits a few eggs on one side of the comb, and then goes to the other side and lays in those cells exactly opposite. This she continues to do till the entire comb is filled.

A good queen, when in the act of depositing her eggs, always has her head pointing towards the bottom of the hive, while an inferior one, when she lays, is seldom found in that position. This accounts for the fact that while the eggs of the former are all laid in one

position (perpendicular), those of the latter are deposited in all ways.

Do not crowd down the prices of queens. They are low enough. If there is to be any crowding done, let it be for quality, and a higher price naturally follows. There is nothing so cheap about an apiary as a cheap queen.

### Glue for Adhering to Tin.

This is a recipe for making glue that will make honey-labels adhere to tin. Oliver Foster obtained the recipe of D. E. Brubaker, and sent it to *Gleanings*, giving his method of using it as follows:

Stir two ounces of pulverized borax into one quart of boiling water. When dissolved, add four ounces of gum shellac. Stir while it boils, until all is dissolved. Apply with a brush in the usual way.

I prefer using a little less water, especially if the labels are small and stiff; then if it becomes too thick to apply readily, warm it a little, or add a little hot water. After applying the label, I press a damp cloth over it to press out and wipe off any surplus glue that may come to the edge.

### General Sherman Loved Honey.

Among other incidents recounted by Col. Belknap, was one that occurred in 1864, when Gen. Sherman was near Chattanooga. One day the General expressed a desire to have some honey. There were some hives upon debatable ground between the two armies. They had escaped the hands of the foragers for some time. Turning to Belknap one day, Uncle Billy said:

"If you can find one convenient, Captain, I wish you would bring in a good bee gum."

That was enough for the Michigan captain. In a jiffy he mounted his horse and was off. With a little squad of troopers he made a raid upon the "gums." After selecting the most likely in appearance, he turned it over and clapped the half of a peep tent over the open end of it. A peep tent is what is termed a shelter tent in the Army of the Potomac. After the "gum" was secured, it was lifted up in front of Belknap, who was still astride his horse. He held it in place with his left arm, and gave a free rein to his steed.

Away he went at full gallop, headed for Sherman's tent. The squad

troopers was at the heels of his horse. It was soon apparent that the Captain was in trouble. The peep tent did not remain in place. The motion of the horse loosened the cloth. It could not be held over the mouth of the gum. The bees popped out and began to hum in the ears of both charger and rider. They struck the Captain in the face, stung him in the back of the neck, and pricked his hands, arms, and legs with their tiny bayonets. They warmed the horse until he became almost frantic. He shot ahead like an arrow. His nose lay on a line with his ears, and in his fury he switched the air with his tail.

The Captain, however, clung to the gum. Nor did he lose his presence of mind. He steered the wild horse straight for headquarters, amid the derisive yells of the soldiers along the way. As he passed the open flap of Sherman's tent, he threw the gum beneath a little table, shouting: "There's your d—d honey."

The Captain whirled away like the wind, leaving the General to fight it out with the bees left in the gum. Uncle Billy for once was surprised. Before he fairly comprehended the situation a bee jabbed him under the eye. Then he got it on the flange of the ear. It was too much. He opened up his brimstone battery in a way that delighted the guard at headquarters. More positive language was never heard. But he held the fort—held it until he felt the bees crawling up the legs of his trousers. Then he dashed from the tent, and was not again seen about headquarters for several hours.—*Boston Herald*.

### Beautiful Queen-Bees.

There has been confusion over the word "beauty." A bee may be beautiful and not be highly colored. Color is not necessarily beauty. There are two classes of Italian bees; the beautiful and the bright. The bright Italians are not beautiful; they are shining, brassy, flashy yellow; while the beautiful Italians have the assemblage of graces that please the eye.—E. L. PRATT, in the *Apiculturist*.

### Workers for the Harvest.

Each bee-keeper ought thoroughly to understand the honey resources of his own locality. He should know when to expect a honey flow. When the time comes, the expected harvest may not come, but the bee-keeper should be in

readiness for it. It is possible to have a good honey flow, and yet secure no surplus, because there are not a sufficient number of bees to gather it. Bees are valuable when there is honey to gather; at other times they are consumers. Less populous colonies can be more successfully wintered in the cellar than out-of-doors; while by proper protection and care in the Spring, such colonies can be brought up to the requisite strength in time for the honey harvest. If by such management we are enabled to so reduce our colonies in strength during the non-producing time of the year that stores are saved to the amount of from three to five pounds per colony, we are well paid for our trouble.—W. Z. HUTCHINSON, in the *Country Gentleman*.

### Convention Notices.

☞ The bee-keepers of Western Connecticut who are interested in forming a Bee-Keepers' Association, are requested to meet at Mr. Edwin E. Smith's, in Watertown, Conn., May 13, as early in the day as possible. A good time is expected.

EDWIN E. SMITH.  
EDWARD S. ANDRUS.

☞ The Ionia Bee-Keepers' Convention, will meet at Ionia (Mich.) May 6, 1891. It is intended by the management to have a Fair in connection with it. W. Z. Hutchinson, of Flint, Mich., editor of the "Bee-Keepers' Review," will deliver an address. He is one of the leading bee-masters of the United States. You cannot afford to miss his address. Come, and bring your wife with you. Get your neighbors to come. Will you please bring with you samples of hive and frame, super and sections, and samples of honey and mode of putting up, etc., and let us have an exhibition of our own.

HARM. SMITH, Sec., Ionia, Mich.

☞ The 8th semi-annual meeting of the Susquehanna County Bee-Keepers' Association will be held at Montrose, Pa., on Thursday, May 7, 1891.

H. M. SEELEY, Sec., Harford, Pa.

☞ The Central Michigan Bee-Keepers' Convention will be held at Pioneer Room, at the Capitol, Lansing, Mich., on Wednesday, May 6. A cordial invitation is extended to all.

W. A. BARNES, Sec., Lansing, Mich.

☞ The Des Moines County (Iowa) Bee-Keepers' Association, will meet at the Court House in Burlington, Iowa, on Tuesday, June 2, 1891, at 10 a.m. It is intended to organize a Southeastern Iowa Association. All interested in bees and honey are cordially invited to attend.

JOHN NAT, Sec., Middletown, Iowa.

GEO. BISCHOFF, Pres., Burlington, Iowa.

☞ I am well pleased with the Sewing Machine you sent me; any person wanting a good Sewing Machine, one that is equal to the high-priced machines which are sold by agents, can do no better than to send for your \$15.00 Machine. They will be agreeably surprised when they see it. Mine is really better than I expected.

W. J. PATTERSON,  
Sullivan, Ills., Dec. 5, 1890.



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## CLUBBING LIST.

**We Club the American Bee Journal** for a year, with any of the following papers or books, at the prices quoted in the **LAST** column. The regular price of both is given in the first column. One year's subscription for the American Bee Journal must be sent with each order for another paper or book:

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**Do not send to us for sample copies** of any other papers. Send for such to the publishers of the papers you want.

**Jacob T. Timpe**, of Grand Ledge, Mich., offers to give away 50 Tested Queens, of his five-banded Italians, to purchasers of his New Potatoes, which have been advertised in the BEE JOURNAL. Do not fail to read his advertisement on page 556. He refers you to his postmaster, as to his responsibility.

## Appreciated When Seen.

I put my "Globe" bee-veil on exhibition at our convention at Greenville, Texas, on April 1 and 2, and it was the cause of considerable admiration.

Greenville, Tex. W. R. GRAHAM.

**The Convention Hand-Book** is received, and I am well pleased with it. Every bee-keeper should have a copy.

CHARLES WHITE.

Farmers' Valley, Nebr., Mar. 3, 1891

## HONEY AND BEESWAX MARKET.

**DETROIT**, April 21.—Comb-honey is quoted at 15@16c; demand light. Extracted, 7@8c. Beeswax firm, at 28@29c.

M. H. HUNT, Bell Branch, Mich.

**NEW YORK**, April 21.—Market is bare of comb-honey. We quote: Extracted, buckwheat, 7@7½c; California, in good demand, at 6½@7¼c, and market well supplied; Southern, none in market. Beeswax, 25@27c.

HILDRETH BROS. & SEGELKEN,  
28-30 West Broadway.

**KANSAS CITY**, April 21.—Market continues about the same; stocks becoming light; no receipts. We quote: White 1-lb. comb, at 16@18c; dark, 12@13c; California white, 2-lb., 14@15c; extracted, 6@7c. No Beeswax in the market.

CLEMONS, MASON & CO.,  
Cor. 4th and Walnut Sts.

**CINCINNATI**, April 21.—Demand good for extracted-honey, at 6@8c. Market is almost bare of comb-honey, for which there is a good demand at 14@16c for choice, in a jobbing way. Beeswax is in good demand at 25@30c., for good to choice yellow.

C. F. MUTH & SON,  
Corner Freeman & Central Aves.

**CHICAGO**, April 21.—Demand for both comb and extracted honey increasing, and our stock is light. Can use shipments to advantage. 1-lb. sections, 16@18c; 2-lb., 14@15c; extracted, 7@8c. Beeswax, 30c.

S. T. FISH & CO., 189 S. Water St.

**KANSAS CITY**, April 21.—Fancy white 1-lb. comb, 18c; fair to good, 17c; dark 1-lb., 14@15c; 2-lb. white comb, 15@16c; 2-lb. dark, 13@14c; extracted, white, 7c; dark, 5@6c.

HAMBLIN & BEARSS, 514 Walnut St.

**CHICAGO**, April 21.—There is the usual Spring demand for honey, and best white continues to bring 17@18c; honey that is off in color and condition sells for 2@3c less; very little call for dark comb. Extracted, is selling at 7@8c, in cans or barrels. Beeswax, 27@28c.

R. A. BURNETT, 161 S. Water St.

**BOSTON**, April 21.—Honey is in fair demand; supply short. White 1-lb. comb is very scarce and wanted, at 18@20c; fair to good, 18@19c; 2-lb. sections, 16@17c. Extracted, 8@9c. Beeswax, 30c.

BLAKE & RIPLEY, 57 Chatham Street.

**ALBANY**, N. Y., April 21.—Honey market is slow, with small stocks of comb. We quote: White comb at 15@16c; mixed, 13@14c; dark, 12@13c. Extracted, light, slow at 7@8c; dark, firm at 6@7c. Beeswax, 26@30c.

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**Catalogues** and Price-Lists for 1891 have been received from

W. H. Norton, Skowhegan, Me.—32 pages—Bees and Apiarian Supplies.

Leininger Bros., Fort Jennings, O.—12 pages.

Geo. W. Cook, Spring Hill, Kans.—8 pages—Bees and Apiarian Supplies.

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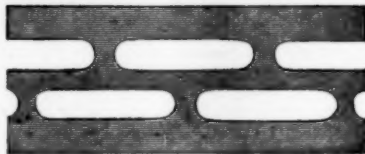
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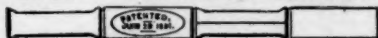
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